



Case Study Software Testing

White Box Testing of Medical Lab Integration Software

Business Need

The H. Memorial Medical Laboratories¹, a chain based in Las Vegas, had commissioned a Web-based System for Laboratory Information Management (SLIM). Essentially, the System tied together corporate and the various laboratory locations for enterprise collaboration, document exchange, automated workflow in complex processes across many test modalities, records management, optimized traceability, and looked after regulatory compliance as well.

Before onsite testing and re-engineering to completely suit H. Memorial work systems could take place, however, the original developer pleaded out-of-state commitments and left the laboratory chain to its own devices. At this point, H. Memorial contacted the Quality SoftPro unit of HyTech Professionals to customize SLIM and do code testing as well. Otherwise, the IT investment would have to be written off.

Solution

Quality SoftPro got down to brass tacks, fully committed to re-developing component modules with an extensive deck of white box tools. In less than a month, the team completed the arduous processes of:

- ▶ Thoroughly scrutinizing the source code branch by branch and down to single lines.
- ▶ Breaking down the entire system into units or component modules to inspect code integrity and logic. Two essential processes to this point were Basis Path and Loop testing.
- ▶ Stepping through all wizards and testing every function in each.
- ▶ Documented bugs and failures while keeping track of open and closed issues.
- ▶ Re-factored the system for better error handling while leaving an audit trail for H. Memorial IT staff to follow.

Our Role

Quality SoftPro ably engaged with H. Memorial as external software testing and quality assurance partner. Our team of QA engineers worked all the rough edges out of SLIM, re-engineered it to suit client requirements and got the System up and running.

Solution Benefits

The set of white box test processes assembled in-house by Quality SoftPro produced results, not least because these sprang from great depth of software testing skill and

¹ The proprietary and “work for hire” nature of our independent software development services requires that client names, revenue projections and other sensitive information be kept confidential and disguised.

HyTech Professionals

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expertise in the health care domain. On the evidence of remarkably trouble-free deployment and a systems review six months later, H. Memorial was gratified that:

- ▶ Dozens of bugs and hardware/software bottlenecks were weeded out before integration testing and deployment.
- ▶ Quality SoftPro salvaged the investment H. Memorial had made in SLIM and carried the ball all the way to implementation.
- ▶ The HyTech Professionals unit completed the engagement on time and at a huge cost saving versus competing third-party testers.
- ▶ At the end of the day, H. Memorial found that the re-factored system met its pressing needs for more efficient use of resources and smoother coordination across the enterprise.

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